

# EVA achievements spotlighted at awards event

The EVA (Extravehicular Activity) Project Office sponsored an annual EVA award event on May 8, 2001, in the Gilruth Ballroom. The event recognized the civil service and contractor community for the activities in the past year. Ron Dittmore, Manager of the Space Shuttle Program, was the guest speaker. Steve Doering, Acting Deputy Manager, read citations. G. Allen Flynt, Acting Manager, EVA Project, and Leroy Chiao, EVA Crew representative, presented the following awards:

### MISSION AWARDS

Certificates designed with flown EVA patch

- STS-99 Shuttle Radar Topography Mission  
For outstanding support to the successful STS-99 mission
- STS-101 2A.2a, ISS Assembly  
For support of the successful EVA that was executed on STS-101, 2A.2a
- STS-106 2A.ab, ISS Assembly  
For support of the successful EVA that was executed on STS-106, 2A.2b
- STS-92 3A, ISS Assembly, Z1 Truss  
For support of the successful EVA's that were executed on STS-92, 3A
- STS-97 4A, ISS Assembly, P6 Truss  
For outstanding support to the successful EVA's that were executed on STS-97, 4A.
- STS- 98 5A, Destiny Laboratory Module  
For support of the successful EVA's that were executed on STS-98, 5A.
- STS-102 5A.1 Expedition Two Crew  
For support of the successful EVA's that were executed on STS-102, 5A.1.

### EVA HONOR AWARDS

EVA certificate with flown EVA patch for events and activities that are not planned or scheduled

- John Graf  
For outstanding efforts to identify and validate the inability of the Draeger Tubes to detect MMH contamination of an EVA crewmember
- Armon Knight  
For outstanding support for the waiver process for shipping the USA Simplified Aid for EVA Rescue (SAFER)
- Gary Krch and Greg LeStourgeon  
For outstanding efforts to build and certify the quick disconnect lever tool prior to the flight of STS-98
- Eric Darcy  
For outstanding efforts to coordinate multiple REBA battery engineering tests
- Patrick Donovan  
For outstanding efforts during STS-97, in helping to solve the problem with the tensioning cable of the solar array
- Ernie Becker  
For leadership and dedication to improve safety and test operations at the NBL
- Lyn Rose  
For excellent support in developing the EVA Flight Data File checklists for each mission

- Patricia O'Connell and David Segovia  
For outstanding efforts to develop and reproduce labels for the exterior of the International Space Station elements
- John Donnellan  
For outstanding effort for the International Space Station Nodes 2 and 3 Extravehicular Activity (EVA)
- Jeff Case and Eleazar "Yuma" Escobar  
For diligence and attention to detail, a problem with the High Strength Bridge Clamp was uncovered prior to STS-100, 6A

### SPACEFLIGHT AWARENESS TEAM AWARDS

- STS-97, Team 4 Solar Array Recovery Team  
For their real-time mission support of the STS-97 EVA repair of the damaged solar array wing. Without the efforts of these people, the ISS would not have two fully functional Solar Array Wings.
- STS-97, Sunnyvale Solar Array Recovery Team  
During STS-97, this team traveled with very short notice to Sunnyvale, California, where they worked long hours with the Solar Array Wing designers to develop, test and relay to Houston the procedures that were used to repair the damaged solar array.
- EMU Decontamination Procedure  
For their superior efforts in developing procedures for decontamination of the EMU. These procedures were crucial to the safety of the crew and success of the first EVA on STS-98 when EV2 became contaminated with ammonia.
- EMU Oxygen Contamination Recovery Team  
For their dedication and exemplary efforts in identifying and recovering from the hydrocarbon contamination found in the Secondary Oxygen Packs (SOP's) in the EMU System. Their efforts allowed for the safe and on time support of critical ISS assembly missions.
- JSC GROUP ACHIEVEMENT AWARDS  
Strela Temporary Stowage Device Team  
For the successful quick-turn delivery of the Strela Temporary Stowage Device for STS-101, used to temporarily stow Strela on PMA1

- SHOSS Box Team  
In recognition of their outstanding support of the EVA's conducted on STS-101 and STS-106
- Increment 1 EVA-Integrated Product Team (IPT)  
For extraordinary effort in developing new procedures and processes to ensure the EVA readiness of the first ISS Long Duration Flight Crew and ground controllers.
- EVA Analysis Integration Team (AIT)  
For support of the EVA AIT in resolving cross flight issues, evaluating requirements exceptions, and ensuring EVA policies and principles are applied to ISS hardware and operations
- Gold Salt Hydrozine Detection Team  
For the successful implementation of a Hydrazine Detection System for STS-102 5A.1
- Joint EVA Tether Team  
For utilizing the best of both U.S. and Russian EVA experience in developing a Joint U.S/Russian Tether Protocol for the International Space Station
- STS-97 EVA Tool Team  
For outstanding support to the successful Tool Development Efforts for the STS-97 Mission
- EVA Technical Interchange Team (TIM)  
For demonstration of extraordinary commitment and exemplary professionalism in resolving complex international issues leading to better cooperation between US and Russian partners that resulted in improved proficiency and safety of ISS Increment EVA as documented in EVA TIM protocols signed in February and March of 2001
- NBL KSC Trip Team  
For contributions to identifying EVA flight hardware and training mockup differences to improve the quality of NBL training and EVA flight support
- EMU Oxygen Contamination Logistics Recovery Team  
For dedication and performance exceeding all expectations in implementing a recovery plan after discovering hydrocarbon contamination in the EMU secondary oxygen system
- EMU Processing Team  
For the extraordinary efforts put forth associated with processing EMUs

### Shuttle Flight

Five flights through 4A (CY00)

EVA's

Nine EVAs for a total of 59 hours and 37 minutes

### Development Test

Eight Major NBL Development Tests, of which two were for verification purposes

Eight engineering runs, 24 crew runs

### EVA Training

2,377 hours NBL training

358 NBL suited events

4,713 hours EVA training (wet and dry)

891 Class III suit processed by FCE in support of training

### Fit Checks (tool-to-tool)

Total: 2380

### Hardware Processed

1098 EVA tools were processed

### Number of New Tools Built

Completed 31 new tool development projects. For these new developments, 70 flight units and 56 training units were delivered.



# Raytheon Technical Services elected to space research industry forum

Raytheon Technical Services Company (RTSC), a subsidiary of Raytheon Company (NYSE: RTNA, RTNB) and a leading support services provider for defense, federal and commercial customers, has been elected as a member of the National Space Biomedical Research Institute's (NSBRI) Industry Forum. As an Industry Forum member, Raytheon will help NSBRI transfer biomedical technology and research advances to the general public. "Raytheon's expertise in taking technologies and converting them to use in the commercial arena makes them a natural addition to the Industry Forum," said Dr. Joseph Kerwin, NSBRI Industry Forum chairman and a former astronaut. "Raytheon has exhibited a desire to make major contributions in this area, and it will

be a major asset to the Industry Forum." The NSBRI, established in April 1997 following competitive selection by NASA, is a consortium of 12 research institutions leading a national effort to carry out the research necessary to ensure safe human exploration of space. The Institute's research into the health risks associated with long-duration space travel is designed to affect similar conditions found on Earth. A few of these similarities include bone loss, muscle wasting, sleep disorders and balance problems. Raytheon Technical Services Company provides technical, scientific and professional services for defense, federal and commercial customers worldwide. It specializes in management, operation and maintenance of customer facilities, equipment and systems; logistics and

life-cycle support; overhaul and repair depot operations; engineering, logistics and personnel support; space and earth sciences; test and training range support; and privatization of government services. Steven Corbin, program manager for the Microgravity Sciences Application Department in the Aerospace Engineering Services group of RTSC, will represent Raytheon on the Forum. "I am looking forward to this opportunity to leverage my personal experience in biotechnology with that of my company to the benefit of humanity, both in space and on Earth," Corbin said. With headquarters in Lexington, Mass., Raytheon Company is a global technology leader in defense, government and commercial electronics, and business and special mission aircraft. In addition to Raytheon, NSBRI

Industry Forum members include The Boeing Company, Draper Laboratories, Hoffman-LaRoche Inc., InDyne, Inc., Lockheed Martin Astronautics, Payload Systems, Inc., MBI International, SGI (formerly Silicon Graphics, Inc.), Southwestern Bell, United Space Alliance, Veridian and Wyle Laboratories. The NSBRI's consortium members are Baylor College of Medicine, which serves as the lead institution, Brookhaven National Laboratory, Harvard Medical School, The Johns Hopkins University, Massachusetts Institute of Technology, Morehouse School of Medicine, Mount Sinai School of Medicine, Rice University, Texas A&M University, University of Arkansas for Medical Sciences, University of Pennsylvania Health System and University of Washington. ■